Los Alamos

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Business Operations Systems P.O. Box 1663
BUS-5 MS/M986

Phone:(505) 667-7704
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July 18, 2000

ATTN: Interested Design-Build Firms and Teams

SUBJECT: **Request for Qualifications,** Tritium Science and Engineering Office Building, Design-Build Solicitation Number 18431-001-00-CB

Ladies and Gentlemen:

You are invited to submit a Statement of Qualifications (SOQ) to be considered for proposal solicitation on a contract to design and construct an office building at the Los Alamos National Laboratory. The contractor will be responsible for designing and building a facility that conforms to the Laboratory's performance criteria as defined in the RFP. The building will be identified as the Tritium Science and Engineering (TSE) Office Building. The TSE Office Building will be a one to three-story structure of approximately 22,000 square feet. The project will also include relocating several office trailers and adding parking spaces. It will be constructed behind a security fence, but the building site itself will be excluded from clearance requirements except for the escorts necessary between the security gate and the construction site. Furniture design will be included in the contract, but procurement and installation of furniture will not be included. The contract value will be up to $3,500,000. The award competition is designed to maximize the number and size of office spaces that can be obtained for this amount while meeting the performance criteria.

The Laboratory intends to award a firm-fixed-price contract to the successful design-build firm that best meets the Laboratory's goals and objectives. Selection will be based on a best-value source selection process using a two-phased approach: Phase 1, the Request for Qualifications (RFQ) and Phase 2, the Request for Proposal (RFP). The objective of this RFQ is to select about three (3) firms or teams to receive the RFP for the design-build contract. The RFP issue date is on or before August 31, 2000. Contract Award for the design and construction of the TSE Office Building is planned for November 1, 2000.

This letter and the following enclosures comprise the RFQ:

Part A. Company Questionnaire
Part B. Statement of Qualifications, with four attachments:
1. RFQ Project Submittal Format
2. Pre-award Survey of Prospective Contractor Safety, BUS5-5 Form 1
3. Standard Resume Format
4. Teaming Matrix

Part C. Design-Build Scope and Program Document

It is Los Alamos National Laboratory's policy that only companies having a history of working safely shall be allowed to work on the site. The determination of a firm or team's eligibility for contract award with respect to its/their safety record is based on the firm having an experience modification rate, a total recordable injury/illness rate, and a lost workday case rate that do not exceed established standards. Attachment 2 of Part B is used to verify a firm or team's safety record.

Part C, the Design-Build Scope and Program Document is included for your information. It indicates the scope of work at the time of the RFQ. This document will be refined before the RFP is issued. Performance and payment bonds will be required. The Laboratory's Project Management Division will oversee this project.

Interested design-build firms must submit six copies of their Statement of Qualification by 4:00 p.m., Mountain Daylight Time on August 7, 2000, including the following:

1. Company Questionnaire (Part A)
2. Statement of Qualifications (Part B)
3. Design/ Build Experience (Attachment 1)
4. Pre-award Survey of Prospective Contractor Safety (Attachment 2)
5. Resumes (Attachment 3)
6. Teaming Matrix (Attachment 4)

The Laboratory will select, from the responses received in the RFQ Phase 1, approximately three of the top rated firms to receive the request for proposal. The Statement of Qualifications shall be in 8 ½" X 11" format bound as a single document with single-sided pages and not to exceed 100 pages including all attachments, resumes etc. We ask that responses be clearly and concisely written in the English language at a minimum of #10 font. Unnecessarily elaborate brochures or other presentations beyond that sufficient to present a complete and effective response to this RFQ are not desired. Legibility, clarity, and completeness are more important. The Laboratory will not compensate respondents for either qualification statement preparation costs or proposal preparation costs. All copies of Statements of Qualifications submitted in response to this RFQ shall become the property of the University of California, operator of the Los Alamos National Laboratory. The Laboratory reserves the right to contact references for validation and verification of data submitted.

Qualifications (six copies) may be mailed to the following address:

The University of California
Los Alamos National Laboratory
Attn: David L. Hay
BUS-5, MS M986
P.O. Box 1663
Los Alamos, New Mexico 87545

Qualifications (six copies) may be sent via express delivery to the following address:

The University of California
Los Alamos National Laboratory
Attn. David L. Hay
Building SM-30
Bikini Atoll Road
Los Alamos, NM 87545

Qualifications (six copies) may be hand-delivered to the following address:

The University of California
Los Alamos National Laboratory
Attn: David L. Hay, BUS-5

Pajarito Complex
3400 Arizona Avenue
Los Alamos, NM 87545

Respondents who opt to hand-deliver their responses are responsible for timely receipt by the Contract Administrator. Responses sent via express delivery will be considered received on the date and time delivered to the Laboratory's Receiving Department. The Contract Administrator must receive responses sent via regular mail by the due date and time stated. Caution: responses sent via regular mail that arrive at the University's receiving warehouse on the day specified may not be forwarded to the Contract Administrator until the next working day, and may thus be considered late. Each Respondent is responsible for sending responses sufficiently in advance of the time specified. Any late responses, as defined above, will not be considered.

Please submit all questions regarding this solicitation in writing to the undersigned at the stated address, via FAX: (505) 665-3300, or via e-mail at hayd@lanl.gov. Answers to questions, and any amendments to this RFQ, will be provided at the following URL: http://bus.lanl.gov/bus5/vendor/solicitations/. We recommend that you check this site periodically and appreciate your interest in this important project.

Sincerely,

David L. Hay
Senior Contract Administrator

Attachment: Request for Qualifications (Parts A, B, and C)

PART A. QUESTIONNAIRE

REQUEST FOR QUALIFICATION STATEMENTS

DESIGN-BUILD FOR THE TSE OFFICE BUILDING
Solicitation Number 18431-001-00-CB

Please furnish information separately for each party of a joint venture, subcontract, or other team of firms supplying design or construction services.

Date Prepared: _____2000

Firm Name/Business Address:

_____

_____

_____

_____

Designation:

Full Service Firm (Includes both Design & Construction Services) ☐

Prime Contractor (Must subcontract out either Design or Construction services) ☐

Joint Venture ☐

Subcontractor ☐

Year Present Firm Established: _____

Point of Contact:

Name _____

Title _____

Phone No. _____

PART B. STATEMENT OF QUALIFICATIONS

REQUEST FOR QUALIFICATION STATEMENTS

DESIGN-BUILD OF THE TRITIUM SCIENCE AND ENGINEERING OFFICE BUILDING, SOLICITATION NUMBER 18431-001-00-CB

The University will review all responses to this Request for Qualifications based on the factors listed below. The three stated evaluation factors are of equal importance. The attributes of each factor will not be independently scored, but will contribute to the overall score for each factor. The respondent's qualifications may, in the aggregate, be comprised of the sum of any proposed subcontractors, consultants, team members, or partners. Failure to meet any of the stated minimum requirements as defined in the evaluation factors below will result in a "no-go" determination.

Evaluation Factors

1.0 Experience and Past Performance

1.1 Design and Construction of Projects

Respondents will be evaluated on their capability to perform the work based upon prior experience. The Selection Evaluation Committee (SEC) will review up to three examples of design-build projects submitted by the respondent that were successfully completed in the last five years and that strongly relate to the TSE Office Building (Attachment 1). **At least two of these design-build projects shall have had a construction contract greater than $2,000,000 each or the respondent will not be considered for selection for Phase 2**. These examples need not all be completed by the proposed prime, but may be shared among the teaming entities. Respondents will be evaluated upon similarity to this project, customer satisfaction, and capability to perform this work. Include the following information:

a) Name, location, and description of project
b) Name, address, and telephone number of Owner's representative
c) Project Magnitude: SF of office space
d) Project Cost (in thousands)
e) Performance Period Dates
f) Technical Challenge (describe the challenge(s) that relate to the TSE Office Building. As examples, this could include such challenges as avoiding underground utilities, working with LANL, etc.)

1.2 Pre-award Survey of Prospective Contractor Safety

In order to be considered, each respondent must meet all three minimum pre-award statistical standards for an average of three years on the Survey of

Prospective Contractor's Safety Record specified in Attachment 2. **No respondent will be considered for selection for Phase 2 if they fail to meet this requirement.**

2.0 Proposed Management Approach

2.1 Project Management- Each respondent will be evaluated upon how it will manage this project based upon the following capabilities: 1) communications, 2) philosophy on delegation of authorities and accountabilities, 3) project controls, 4) conduct of engineering, 5) construction safety, 6) construction management, 7) change control, 8) teaming with the customer, 9) problem solving techniques, and any other topics the Respondent considers relevant.

2.2 Organizational Structure-

The respondent's organizational structure will be evaluated upon how the major layers of management and expected reporting relationships will support the design and construction team and enhance their performance of this work.

2.3 Proposed Key Personnel Positions

The following key positions will be evaluated to determine how well the respondent can perform the work: Project Manager, Design Team Leader, and Construction Superintendent. The Respondent may choose to expand this list (Attachment 3) or modify it to match its proposed organizational structure, provided that the primary leadership positions remain as "key personnel."

2.4 Northern New Mexico Economic Development Initiatives

Respondents will be evaluated on their approach and initiative for using small, disadvantaged and local businesses to enhance economic development in the region. These factors include at a minimum:

A. Degree of commitment of the offeror to implement initiatives.
B. Realism and past performance of the proposed initiatives.
C. Impact of the initiatives on the economy of Northern New Mexico

3.0 Teaming Experience

Respondents will be evaluated on their experience in working with the other member(s) of the proposed team on other design/build and/or design/bid/build onstruction projects as applicable. Using the matrix described in Attachment 4, respondents will indicate the role that the proposed key personnel played in the three cited projects described in 1.1.

ATTACHMENT 1 **DESIGN/BUILD EXPERIENCE** **TSE Office Building** **Solicitation No. 18431**

Project Name Location/City/ State	**Description**	**Owner Name/Phone**	**Cost**	**Period of Performance (Dates)**	**Magnitude/ Challenge**	**Small Disad North Mexic Parti Name, $Amou**

Attachment No. 2

When this form is completed by the offeror, the restriction on disclosure of data stated below applies

This document includes data that shall not be disclosed outside the University or the Government. This restriction does not limit the University's or Government's right to use information contained in this data if it is obtained from another source.

Preaward Survey of Prospective Contractor Safety

Company Name:	**Date:**
RFQ or Solicitation Number: 18431-001-00-CB	**Title:**

1. List your firm's Workmen's Compensation Experience Modification Rate (EMR) for current period (calendar year to-date) and the previous there year period. below.

Rate Type: Interstate ____, Intrastate ____, Monopolistic State _____

Insurance Carrier: _____

2. Complete the following table for the indicated 3 annual periods using U. S. Bureau of Labor Statistics Guidelines to determine recordability and lost workdays from company OSHA 200 logs.

Year	**1997**	**1998**	**1999**	**3-Year-Average**
Experience Modification Rate				
Total Recordable Injury/Illness Case Rate				
Lost Workday Case Rate				

Preaward Statistical Standards		
Experience Modification Rate	**1.00**	The "EMR" is a number that is assigned to your company based on the insurance premium you pay and your loss statistics. If you do not have this number, contact your insurance company. If your company has not been assigned an EMR number, please indicate "N/A".
Total Recordable Injury/Illness Case Rate [US BLS (1995)] (see Company OSHA 200 log, col. 1,2 & 6)	**10.6**	Total Recordable Incidents x 200,000 / Total Employee Hours Worked = Rate

Lost Workday Case Rate US BLS (1995) (see Company OSHA 200 log, col. 2)	**4.9**	Total Lost Work Day Cases x 200,000 =Rate Total Employee Hours Worked

BUS-5-5 Form 1 (July 1, 1998) (Previous edition is obsolete)

ATTACHMENT 3

STANDARD RESUME FORMAT

Name:

Proposed Title/Assignment on contract:

Experience Summary (brief summary of overall experience and capabilities including the name and phone number of the client that may be used for reference checking:

Current Assignment (Include description of duties and from /to dates):

Current Clients/Customers (Include current address and telephone number):

Education:

Technical Qualifications:

Description(s) of Experience relevant to Proposed Contract Assignment:

Provide Three Business Related References:

List Awards/Honors/Publications:

Note Resumes shall not exceed two pages in length. References listed in the resume may be contacted to verify relevant experience.

ATTACHMENT 4
Teaming Matrix

lo.	Project Name or Title	Name of Project Manager	Name of Design Team Manager	Name of Construction Manager
1				
2				
3				
4				
5				

The names of the three people listed as “key personnel” go across the top of the matrix. The names or titles of the five projects listed on the Project Submittal form go down the column adjacent to the associated project number. If any of the key personnel worked on any of the five projects, the role that they played on the project should be specified under their name in the row of the project with which they were involved. Unless every member of the key personnel team worked on each one of the five projects, there will be blank areas in the matrix. If none of the key personnel worked on any of the five projects, the entire matrix will be blank.

SECTION 01000

DESIGN-BUILD SCOPE AND PROGRAM DOCUMENT

PART 1 GENERAL

1.1 DEFINITIONS

A. Adjacencies: Functions that are to be located immediately next to each other or are to be near each other.

B. Tritium Science & Engineering Office Building (TSEOB): All requirements contained in the Contract to design and construct a facility (Structure Number TA 16-824) to support the operations of ESA/TSE personnel at Los Alamos National Laboratory, Los Alamos NM.

C. Constraints: Building and site design requirements that are established by the Contract.

D. Design-Builder: Contractor

E. Function: Space and facility program requirements (PROGRAM DOCUMENT) for a specific activity scheduled to be conducted within the Tritium Science & Engineering Office Building. Each Function is described by a number, a title, a description, staffing, the number of enclosed spaces for each function, size of each enclosed space, the adjacencies and some of the constraints/unique requirements for each space.

F. GFE: Government Furnished Equipment. See Section 01015.

G. “LANL” or “Laboratory” or “University”: Los Alamos National Laboratory, Los Alamos NM, operated by the University of California

H. Level: “Floor” or “Story”, as defined by NFPA and the UBC, whichever is stricter.

I. Net Square Footage: Net square foot area requirements are calculated from the inside face of the exterior walls to the centerline of the interior walls. Net square footage does not include exterior walls, exterior porches/canopies, exterior overhangs, 8.6 Electrical Room(s), 8.7 Mechanical Room(s), 8.8 Data/Telephone Room(s). 8.9 Restrooms, 8.11 Janitor Closets, 9.1 Main Entry Vestibule, 9.2 Main Entry Area/Reception, 9.3 Corridors, 9.4 Stairs, 9.5 Elevator & Elevator Equipment Room, or 9.6 Secondary Entrance Vestibule.

J. NIC: Not in the Design-Build Contract.

K. PM or PMD: Los Alamos National Laboratory Project Management Division.

L. Size: Net square foot requirement (min) per function space.

M. Staffing: Number of full time or part time employees that can occupy an individual office space comfortably.

N. STC Enclosure: A minimum acoustical requirement for the entire space of a given Function based on construction assemblies tested in factory conditions. The STC enclosure includes the interior wall, ceiling and floor assemblies of a space resulting in a measurable sound transmission reduction of at least the factors described in the PROGRAM DOCUMENT below.

O. SWMU: Solid Waste Management Unit, a term indicating a physical site area that contains unremediated waste materials. Remediation of SWMUs is NIC.

P. TBD: To be determined.

Q. University Support Services Contractor: Johnson Controls Northern New Mexico (JCNNM).

1.2 DESIGN-BUILD SCOPE AND PERFORMANCE CRITERIA

A. Mission Statement: The principal requirement of this project is to erect a new structure to support the operations of the ESA/TSE Group. The building is to be located in proximity to the existing WETF facilities at TA16.

B. Quality Program: Comply with DOE Order 414.1, Quality Assurance. Submit a Quality Assurance Plan customized to the TSEOB project within 20 working days from Award of Contract. The Management Level System Classification for the Tritium Science & Engineering Office Building is ML-3.

C. Environmental:

1. No wetlands, SWMUs, environmental species or archeological concerns exist on the site.

2. The site is less than 5 acres and will not require a NPDES General Permit.

3. The University has completed a study of environmental issues (ESH ID 00-0060). This Study is available upon written request to the Contract Administrator.

D. Site Altitude: Provide civil, architectural, mechanical and electrical components, equipment and systems suitable for operation at 8000 feet above sea level.

E. Existing Improvements: Protect the existing drainage system improvements, sidewalks, pavement, curbs, fences, bollards, and exterior light poles from

damage.

F. Civil and Site Improvements:

1. Provide all required site development work as defined in the performance criteria. Provide complete sitework systems and site products that are compatible with all other related building systems.

2. Site Demolition: Scarify the site surface soils to a depth of 6 inches and either remove the scarified material from the site or engineer the soils for use in the new landscape.

3. Tree Removal: Remove trees and shrubs from the site and dispose of the material properly.

4. Demolition of Existing Trailers TA16-296, TA16-297 and TA16-298:

   a. Disconnect and remove existing trailers TA16-296, TA16-297 and TA16-298. Remove and cap all utilities. Relocate the trailers to a parking lot approximately one mile away from the project site.

   b. Remove all surface improvements and asphalt as indicated on the attached Site Sketch.

5. Parking and Vehicular Access:

   a. Provide vehicular access and a parking lot at the location formerly used for Trailers TA16-296, TA16-297 and TA16-298. Regrade the area and provide stripped asphaltic pavement for a minimum of thirty (30) new 9-foot wide parking spaces and for two (2) new ADA accessible parking spaces. Provide erosion control catch basins from the parking lot outlet(s). See Section 16525 for the parking lot lighting.

   b. Provide vehicular access to TSEOB as required below and in the ASPHALTIC CONCRETE PAVING Specification. Provide stripping for the new parking lot and pavement markings for the designation of the traffic flow.

   c. Provide new handicapped accessible parking spaces near the Building Main Entry and at the Parking Lot, in accordance with 1998 ANSI A-117.1, the ADA and Federal Standards. Provide stripping and signage for all handicapped accessible spaces.

   d. Provide three (3) new standard parking spaces, 9 ft wide x 18 ft long each, designated as “Visitor”. Visitor spaces are to be in close proximity of the Main Entry Vestibule, but are not to supercede the required location for handicapped accessible spaces.

   e. Provide exterior lighting of all parking spaces.

f. Provide continuous concrete curb & gutter between the parking/vehicle access areas and the buildings.

g. Provide precast concrete bumpers at each parking space that does not have concrete curb & gutter.

h. Provide stripping for the new parking and pavement markings for the designation of the traffic flow.

i. Provide vehicle access for moving vans within 20 feet of a 6-foot wide building entrance double door.

j. Accommodate emergency vehicle access.

k. Allow vehicular and pedestrian access to the WETF facilities to remain functioning during the course of the TSEOB construction.

6. TSEOB Drainage, Erosion Control and Landscaping:

a. Calculate the surface drainage flow from the adjacent Site within 300ft of the Building and within 300 feet of the Parking Lot edge.

b. Accommodate the flow onto the TSEOB site by providing a culvert under the main entrance access road. Sheet flow away from the Building, from the access roads, from exits and from adjacent structures. All open-air drainage culverts are to be minimum 18 inches in diameter for ease of maintenance.

c. Cut and fill the site soils as necessary to accommodate proper road grades and surface contours.

d. Stabilize the site drainage for the entire area designated as “Use of Premises Limit”.

e. Selectively and aesthetically remove the trees from the existing ponderosa pine forest to accommodate views and access while mitigating wildfire potential.

f. Provide erosion control blankets and/or seeding resulting in low maintenance landscape zones around the Parking Lot and around the Building. Do not provide cultivated / irrigated (medium or high maintenance) landscaping.

7. Limits of Construction: Establish and limit the construction staging functions within the established boundaries.

8. Site Pedestrian Access and Sidewalks: Provide a 12 ‘ wide x 8’ long reinforced 6 inch thick concrete pad immediately outside each entrance to the TSE Office Building. Provide continuous 5-ft (minimum) wide

concrete pavement sidewalks from all parking areas to the entrance concrete pads. Steepness of sidewalk slope is to be no greater than 1ft rise to 20ft length.

9. Main Entrance Cover: Provide at least 70 sq ft of covered canopy/porch area over the main entrance to the building.

10. Secondary Entrance Cover: Provide at least 70 sq ft of covered canopy/porch area over the secondary entrance to the building.

11. Patio: Provide a 500 sf (minimum) concrete patio off of the Kitchen/Breakroom area. Slope to drain. See the PROGRAM DOCUMENT. Divert roof drainage away from the patio area. See Section 16525 for the patio lighting.

12. Site Stairs: Provide concrete site stairs with metal handrails. Do not provide exterior metal stairs.

13. Main Entry Court and Secondary Entry Court: Utilize Entry Courts as a design element to transition the large mass of the Building to an appropriate pedestrian/natural environment scale. Accommodate space for bicycle parking (racks are NIC) near the Entry Courts. The courts should create a clear identification for the building entrance and assist in protecting the entrances from northern winter winds. ***Clarify on dwg***

14. Pipe Bollards: Provide pipe bollards where required by LANL Standards.

15. Utilities:

    a. Extend potable water to TSEOB from the existing main as described in Section 02660.

    b. Extend fire protection water to TSEOB from the existing main and post indicator valve described in Section 02660. Provide a new fire hydrant on the northwest end of the Tritium Science & Engineering Office Building such that the entire building complex is accessible within 300 ft of a hydrant.

    c. Extend natural gas to TSEOB from the existing main located east of the building site as described in Section 02550.

    d. Do not use the existing steam line system.

    e. Connect TSEOB to the existing sanitary sewer main located east of the building site as described in Section 02730.

    f. Extend underground electrical power to TSEOB from the electrical manhole northeast of Building TA16-1157. See Section 16115.

    g. Extend communications lines to TSEOB from the existing pedestal

#_____ located southeast of the building site. Provide duct-banks for telecommunications and data information as described in Section 16115. The communication system shall include only. Work with LANL communication personnel (CIC-4) to ensure adequate system design and construction of open (data) communication lines and to provide for future secure line installation. A Protected Data System (PDS) will be installed by CIC-4 after substantial completion. The PDS is NIC.

16. Building Location and Orientation: Locate TSEOB at least 50 feet from adjacent buildings. Setback the building at least 20 feet from the existing road. Design the site to accommodate ease of snow removal. Orient and locate the building to minimize the walking distance from TSEOB to the WETF building entrances.

17. Building Location Relative to Fire Mitigation: Locate TSEOB at least 50 feet from the trunk of the closest ponderosa pine.

18. Site Exclusions:

    a. Do not provide exterior benches, tables, trash receptacles, ash receptacles, bike racks, bike lockers, kiosks or trash enclosures.

    b. Do not provide landscape accent lighting fixtures, exterior drinking fountains or landscape fountains.

19. Optional Site Improvements: At the Contractor's option various other site improvements could be provided such as additional parking or freestanding shelters/pavilions.

G. Structural:

1. The types of structural systems utilized will be selected based on performance criteria such as ease of maintenance, flexibility, and adherence to schedule and cost. While structural steel frame construction has proven appropriate at LANL in the past for a variety of building systems, the Design-Builder will determine which structural systems will be constructed while meeting the minimum codes and standards. By allowing innovation in the selection of structural systems, LANL anticipates that the most cost effective and space efficient systems will be provided.

2. While a single system is not to be dictated to the Design-Build firm, it is anticipated that the structure will not be built of numerous types of foundation and framing systems. Varied combinations of steel, precast concrete, cast in place concrete and masonry systems on a single project of this size is inefficient and can detrimentally effect coordination of other architectural and mechanical building systems.

3. The seismic design soil type is _____.

4. Any unique floor loading requirements (such as safes) are defined in the PROGRAM DOCUMENT below.

H. Architectural :

1. Design Statement: The Tritium Science & Engineering Office Building should reflect the values of LANL's ESA Division, primarily efficiency and the use of advanced technology. Other values? The character and sense of permanence for the facility should be respectful while not being ostentatious. The building finishes and layout should reflect a moderate level of quality.

2. Building Levels: TSEOB is to be either one (1) story, two (2) stories, two and a half (2 ½) stories or three (3) stories.

3. Materials and Finishes: Select the building materials and finishes relative to compatibility with other building systems, long-term maintenance, potential failure effects and material availability.

4. Floor Finishes:

   a. Provide carpet and rubber floor base at all occupied spaces unless otherwise indicated below or in the PROGRAM DOCUMENT.

   b. Provide hard surface durable flooring materials (such as ceramic tile or quarry tile) in all 8.9 Men's Restrooms, Women's Restrooms & Shower/Locker Areas, 8.3 Exercise Room, Entrance Vestibules, Janitor Closets, and at Stairs.

   c. Provide sealed concrete flooring in the Elevator Equipment Room, and in the 8.6, 8.7, 8.8 General Support maintenance rooms.

5. Ceiling Finishes: Typically, the ceilings will be of suspended acoustical tile but the Design-Builder is encouraged to be innovative in the selection of space heights and materials as long as the stated Code, Standard, energy conservation and acoustical goals are met. Provide a minimum of 8foot-0inch height from finished floor to ceiling surface in all spaces.

6. Elevators & Stairs: Provide adequate circulation systems and vertical transportation systems to service the Building and to comply with applicable codes.

7. Miscellaneous Metals and Hardware: Furnish custom fabricated bolts, plates, anchors, hangers, dowels and other miscellaneous steel and iron shapes as required for framing and support of the building systems.

8. Handrails and Guardrails: Provide handrails or guardrails as required.

Do not provide wood handrails or guardrails. Comply with CFR 1910.23 for horizontal and vertical load resistance for railings, brackets, flanges, fittings and anchors.

9. Thermal Resistance/Moisture Enclosure: Walls (excluding windows and doors) should have a minimum R-value of 19 and roofs should have a minimum R-value of 30. The use of high-mass materials, such as masonry, for exterior walls is appropriate for passive solar heating. The Design-Builder is allowed a degree of flexibility in the selection and installation of the exterior building wall enclosure systems.

10. Functional Efficiency and Space Planning: Submit design concepts illustrating the functional efficiency and space planning configurations. Configure the various spaces such that the GTS/NTTS and Group Administration functions are closest to the Main Entry. The Exercise Room is to be near the Secondary Access door to WETF.

To be developed.

BUBBLE DIAGRAM OF TEAM PHYSICAL RELATIONSHIPS

11. Screening of Mechanical and Electrical Equipment, Utilities, Cabling and Wiring: Mechanical equipment, appurtenances, and penthouses located on rooftops should be architecturally screened and enclosed. Utility equipment, such as water meters, gas meters and electric meters must be screened from public view. No exposed or overhead conduit, cabling, or wiring is acceptable except in the Mechanical/Electrical Rooms. Locate the exposed exterior utility systems away from the building's Main Entry. Mechanical HVAC units are not to be visible from the parking areas or road.

12. Office Furnishings and Design of Furnishings (modular office systems): Design the layout configuration and types of furniture to be placed in the building. Coordinate the furniture design with the architectural, mechanical and electrical systems. The procurement and installation of modular office systems/furnishings is NIC.

E. Mechanical:

1. Provide HVAC systems, HVAC piping, water distribution, sewer & vent systems, natural gas systems, fire protection systems, roof drainage systems, mechanical equipment instrumentation, controls, commissioning and testing as required by the performance specifications.

2. Design and construct all spaces in the facility with a cooling set point temperature of 75 F dB and a heating set point temperature of 72 F dB (with temperature tolerance of +- 2 1/2 F dB) unless otherwise indicated. The ASHRAE (Standard 62) outside air requirement per occupant will be 20 cfm for all offices and conference rooms. Provide restrooms with an exhaust requirement of 2 cfm/ft2.

3. No special provisions will be made for water efficient systems, but LANL will evaluate proposals from the Design-Builder that address savings (either initial or long term) relative to water efficient systems.

F. Electrical:

1. Provide outside utility service systems, interior power distribution systems, grounding systems, lightning protection systems, lighting systems, communications systems, fire alarm systems and security systems in accordance with the performance criteria.

2. Furnish products listed and labeled by Underwriter's Laboratories for

their applications and installation conditions and for the purposes specified.

G. Process Systems:

1. No industrial process piping or HVAC systems are anticipated for this project. No unique monitoring, sampling, filtration or functions are required.

H. Fire Protection & Safety:

1. Comply with the requirements of 'B' occupancy as defined in the Uniform Building Code and with 'New Business' occupancies as defined in the NFPA Life Safety Code 101.

2. Provide a building that is of at least Type II-N construction as defined by the Uniform Building Code.

3. Provide 1 hr rated construction around the stairwells.

4. Provide a building that is fully protected by an automated fire suppression system.

5. All fire alarms, emergency lighting, fire blocking, fire separations, fire detection and emergency access/egress systems will comply with the NFPA 101 Life Safety Code and all other applicable NFPA codes and standards.

6. Provide entrances and exits to the building that are protected from snow and ice accumulation to avoid slipping hazards.

I. Energy Conservation:

1. The building is to function in an energy conscious manner. This facility is not intended to be a showcase for energy conservation techniques or solar design, but innovative energy conservation measures proposed by the Design-Builder will be considered.

2. Provide for shading of exterior wall glazing from extreme solar heat gain and glare.

J. Acoustical Provisions:

1. Provide room enclosures and acoustical control for each space as indicated in the PROGRAM DOCUMENT. Submit the test results of the STC and NRC values as tested under factory conditions.

2. Provide sound attenuation of mechanical equipment.

3. All liquid piping systems must be designed to minimize noise generation in the Building.

K. Maintenance:

1. Provide materials and systems that have regional manufacturer representation, regional availability of spare parts and a record of providing rapid maintenance service assistance.

2. Locate the building maintenance functions such that maintenance personnel can access equipment with a minimal disruption of the building's occupants.

3. All valves, VAV units, dampers, concealed units and equipment requiring routine maintenance are to be accessible and are to have adequate clearance to allow for proper maintenance. Locate VAV units above doors.

4. Provide Operations and Maintenance Manuals as specified.

L. Interior Space Flexibility:

a. The configuration of the building's mechanical systems, corridors and structural grid is to be flexible for future changes. Integrate and plan modular construction systems into the design to allow for ease construction and future maintenance interchangeability.

b. Utilize a systems grid module perpendicular to the Corridor such that walls can be added or removed in the future with a minimum of interference with the established locations of light fixtures, HVAC registers, electrical outlets, windows, structural columns, telecommunications outlets and fire suppression system heads. The module is to be either 5'-6" or 6'-0".

M. Future Expansion: The Design-Build firm is to indicate what future expansion capabilities their design has, but there are no specific future expansion requirements in the Program Document.

N. Security:

a. The building is to be constructed in a non-secure area. Temporarily provide secure fencing around the proposed building site. Vehicular access will be allowed directly from State Road 4 without the encumbrance of access through a guard station.

b. The utility tie-ins will be located in a secure area. All personnel associated with utility tie-ins in the secure area must be Q-cleared or escorted.

c. After construction, the building will be incorporated into a secure area (NIC). As such, provide a security system to control access to the building

and to control after-hours access.

d. See Section 01140.

1.3 DESIGN SUBSTANTIATION/SUBMITTALS

A. See DESIGN SUBSTANTIATION/SUBMITTALS Section 01300.

B. Construction is not to proceed without a completed, stamped, signed set of drawings and specifications being present at the job site.

1.4 SUPPLEMENTAL TECHNICAL GUIDANCE – attached to this Section:

A. Site Survey titled: _____ by Johnson Controls Northern New Mexico, dated_____.

B. Adjacent Utilities Drawing: excerpt from WETF Site Utilities Plan, TA16___

C. Site Sketch: Tritium Science & Engineering Office Building. Siting of Parking, Landscape and Use of Premises Limits dated_____.

D. JCNNM diskette of Site Survey, in AutoCAD format, dated _____.

E. Soils Borings and Soils report – under separate cover.

PROGRAM DOCUMENT

A. Purpose: The PROGRAM DOCUMENT describes the programming requirements for the Tritium Science & Engineering Office Building. Generally, the Program Document lists the quantities of program requirements while the remaining Division 1-16 Performance Criteria describes the quality, but either document can, and do, contain quantity and quality requirements and both are integral to the Contract.

B. The minimum space and function requirements for TOB are described below:

Function Number & Title	**Function Description**	**Staff**	**Number of Spaces & Size of each**	**Adjacencies**	**Constraints and unique requirements for each space.**
1.	**TSE Group Administration**				
1.1. Group Leader Office	Provide program management / administration space for the TSE Group Leader	1	One (1) 230 sf office	Physically adjacent to 1.3. In close proximity to 1.2 Locate near 1.4	1. Locate on the exterior perimeter wall. Corner office desirable. 2. Accommodate desk, markerboard, computer terminal, printer and small conference table with 6 chairs (all NIC). 3. Exterior window(s) at eye level - min 32 sf 4. STC 45 enclosure minimum. 5. Provide a TV / Video outlet. 6. Provide a 4-port telecommunications outlet on each wall. 7. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
1.2 **Deputy Group Leader**	Provide program management / administration space for the TSE Deputy Group Leader	1	One (1) 200 sf office	Physically adjacent to 1.3. In close proximity to 1.1 Locate near 1.4	1. Locate on the exterior perimeter wall. 2. Accommodate desk, markerboard, computer terminal, printer and small conference table with 4 chairs (all NIC). 3. Exterior window(s) at eye level - min 16 sf 4. STC 45 enclosure minimum 5. Provide a 4-port telecommunications outlet on each wall. 6. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.

1.3 Group Secretaries	Provide space for secretarial support of the program management/ administration of the TSE Group	3	One (1) 240 sf office accommodating three persons	In close proximity to 1.1, 1.2 and to 1.4	1. Allow space for desks, small fax/copier, 2 file cabinets, 2 bookcases, markerboard, computer terminals and a printer, (all NIC). 2. Prefer exterior window at eye level. 3. STC 40 enclosure minimum. 4. Provide a 4-port telecommunications outlet on each wall. 5. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
Function Number & Title	**Function Description**	**Staff**	**Number of Spaces & Size of ea.**	**Adjacencies**	**Constraints and unique requirements for each space.**
1.4 Group Support Staff	Provide space for technical staff support to the TSE Group Office	1	One (1) at 120 sf	In close proximity to 1.1, 1.2 and 1.3	1. Exterior window at eye level – min 16 sf 2. Accommodate desk, markerboard, computer terminal and printer (all NIC). 3. STC 40 enclosure minimum. 4. Provide a 4-port telecommunications outlet on each wall. 5. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
1.5 Conference Room	Provide space for project and team meetings	15 person occupancy	One (1) at 300sf	Central location on Upper Level Close proximity to 1.1, 1.2 and 1.3	1. Locate away from the exterior perimeter. Daylighting not required. 2. Provide retractable electric 4'X4' projection screen. 3. Accommodate bookshelves, a 3'x8' markerboard, and conference table (all NIC). 4. STC 45 enclosure minimum. 5. Provide a 4-port telecommunications outlet on each wall. 6. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets. 7. Provide variable lighting control dimmer. 8. TV / VCR 19" screen & mounting bracket (NIC). Provide outlet and blocking in wall for bracket.
1.6 Group Copy/ Mail Room	Provide space for large copy machine,	NA	One (1) at 150 sf	Adjacent to 1.3 Close	1. Accommodate large copy machine and computer printer (NIC). Provide 208V, 1phase, 30A outlet. 2. Natural daylighting discouraged.

	document production area, storage, and mail.			proximity to 1.1 & 1.2	3. Provide counter top, 6-ft long min., for document production area. Provide base cabinets and wall cabinets. Provide two (2) standard outlets above countertop. 4. Provide 120 built-in mailboxes – standard open grid type. 5. STC 40 enclosure minimum. 6. One (1) 4-port telecommunications outlet above countertop. 7. Accommodate 3'x3'x9'long area for recycling station and shredder (NIC) 8. One (1) standard outlet at each wall.
Function Number & Title	**Function Description**	**Staff**	**Number of Spaces & Size of ea.**	**Adjacencies**	**Constraints and unique requirements for each space.**
2.	**GTS Area**				
2.1. GTS Staff Offices	Provide space for GTS staff	1 ea. for a total of 12	Twelve (12) separate 120 sf offices accommodating one person each.	Close proximity to other GTS staff offices.	1. Exterior window at eye level – min 16 sf 2. Accommodate desk, markerboard, computer terminal, printer and credenza with 2 chairs (all NIC). 3. STC 40 enclosure minimum. 4. Provide a 4-port telecommunications outlet on each wall. 5. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
2.2 GTS Tech Offices	Provide space for GTS technicians.	2	One (1) 150 sf office accommodating two persons	In close proximity to 2.2	1. Exterior window preferred. 2. Accommodate desks, markerboard, computer terminals, & printer (all NIC). 3. Provide a 4-port telecommunications outlet on each wall. 4. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
2.3	Provide	15	One (1)	Centrally	1. Locate away from the exterior

GTS/NTTL Conferenc e Room	space for project and team meetings	person occupa ncy	at 300sf	located relative to GTS staff and NTTL staff	perimeter. Daylighting not required. 2. Provide retractable electric 4'X4' projection screen. 3. Accommodate bookshelves, a 3'x8' markerboard, and conference table (all NIC). 4. STC 45 enclosure minimum. 5. Provide a 4-port telecommunications outlet on each wall. 6. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets. 7. Provide variable lighting control dimmer. 8. TV / VCR 19" screen & mounting bracket (NIC). Provide outlet and blocking in wall for bracket.
2.4 GTS/NTTS File/ Reading Room	Provide space for classified files and reading materials. Provide space for two personnel.	2	One (1) at 400sf	Locate in close proximity to GTS and NTTL staff and tech offices.	1. Locate away from the exterior perimeter. Daylighting not required. 2. STC 45 enclosure minimum. 3. Accommodate desks, markerboard, computer terminals, & printer (all NIC). 4. Accommodate small conference table and 4 chairs (NIC). 5. Accommodate 15 to 25 freestanding safes, 18"w x 36"d x 60" h. (NIC). 6. Accommodate shelving (NIC). 7. Provide a 4-port telecommunications outlet on each wall. 8. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets. 9. Provide ¾" conduit, pull wire and outlets for card or palm reader. Extend the conduit to the 8.8 Telecommunications Room.
Function Number & Title	**Function Description**	**Staff**	**Number of Spaces & Size of ea.**	**Adjacenci es**	**Constraints and unique requirements for each space.**
3. NTTL Area					
3.1 NTTL Staff Offices	Provide space for NTTL staff	1 ea. for a total of 5	Five (5) separate 120 sf offices accomm odating one	Close proximity to other NTTL staff and tech offices.	1. Exterior window at eye level – min 16 sf 2. Accommodate desk, markerboard, computer terminal, printer and credenza with 2 chairs (all NIC). 3. STC 40 enclosure minimum. 4. Provide a 4-port telecommunications

			person each.		outlet on each wall. 5. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
3.2 NTTL Tech Offices	Provide space for NTTL technicians.	2	One (1) 150 sf office accommodating two persons	In close proximity to 3.1	1. Exterior window preferred. 2. Accommodate desks, markerboard, computer terminals, & printer (all NIC). 3. Provide a 4-port telecommunications outlet on each wall. 4. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
4. Engineering Team Area					
4.1 Engineering Team Staff Offices	Provide space for engineering team staff.	1 ea. for a total of 9	Nine (9) separate 120 sf offices accommodating one person each.	Close proximity to other engineering team staff and to 4.2.	1. Exterior window at eye level – min 16 sf 2. Accommodate desk, markerboard, computer terminal, printer and credenza with 2 chairs (all NIC). 3. STC 40 enclosure minimum. 4. Provide a 4-port telecommunications outlet on each wall. 5. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
4.2 Design/ Drafting Area	Provide space for computer-aided design and drafting functions.	3	One(1) at 400 sf	Close proximity to 4.1	1. Accommodate three drafting stations with desks, large screen computer terminals and three tabletop printers. Accommodate layout space for each station for D size drawings (all NIC). 2. Accommodate 10 linear feet of 6-ft high freestanding adjustable storage cabinets and adjustable wall shelving. Accommodate table in center of room for opening/sorting “D” size drawings. Accommodate 2 vertical file racks and one 4 tier horizontal file racks for “D” size drawings. Accommodate worktable for paper cutter (all NIC). 3. STC 40 enclosure minimum. 4. Provide a 4-port telecommunications outlet on each wall. 5. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.

5. Operations Quality Area					
5.1 Operations Quality Staff Offices	Provide space for operations quality staff.	1 ea. for a total of 5	Five (5) separate 120 sf offices accommodating one person each.	Close proximity to other Operations Quality staff.	1. Exterior window at eye level – min 16 sf 2. Accommodate desk, markerboard, computer terminal, printer and credenza with 2 chairs (all NIC). 3. STC 40 enclosure minimum. 4. Provide a 4-port telecommunications outlet on each wall. 5. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
5.2 Training Area	Provide area for operations quality personnel training and group training functions.	3	One(1) at 400 sf	Close proximity to 5.1	1. Accommodate three desks, 3ftx8ft markerboard, computer terminals, printer and credenza with 2 chairs (all NIC). 2. STC 40 enclosure minimum. 3. Provide a 4-port telecommunications outlet on each wall. 4. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
5.3 QA File Area	Provide space for QA file storage and two personnel.	2	One(1) at 500 sf	Close proximity to 5.1	1. Accommodate two desks, layout table, file cabinets, computer terminals and printer (all NIC). 2. STC 40 enclosure minimum. 3. Provide a 4-port telecommunications outlet on each wall. 4. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
6. Program Staff					
6.1 Program Staff Offices	Provide space for Program staff.	1 ea. for a total of 9	Nine (9) separate 120 sf offices accommodating one person each.	Close proximity to other Program staff.	1. Exterior window at eye level – min 16 sf 2. Accommodate desk, markerboard, computer terminal, printer and credenza with 2 chairs (all NIC). 3. STC 40 enclosure minimum. 4. Provide a 4-port telecommunications outlet on each wall. 5. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.

Function Number & Title	**Function Description**	**Staff**	**Number of Spaces & Size of ea.**	**Adjacencies**	**Constraints and unique requirements for each space.**
7. Facilities Operations Area					
7.1 Facility Ops Staff Offices	Provide space for Facility Operations staff.	1 ea. for a total of 6	Six (6) separate 120 sf offices accommodating one person each.	Close proximity to other Facilities Operations staff.	1. Exterior window at eye level – min 16 sf 2. Accommodate desk, markerboard, computer terminal, printer and credenza with 2 chairs (all NIC). 3. STC 40 enclosure minimum. 4. Provide a 4-port telecommunications outlet on each wall. 5. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
7.2 Facility Ops Technical Offices	Provide space for Facility Operations technicians.	10	Five (5) 150 sf office accommodating two persons	Close proximity to 7.1	1. Exterior window preferred. 2. Accommodate desks, markerboard, computer terminals, & printer (all NIC). 3. Provide a 4-port telecommunications outlet on each wall. 4. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
7.3 Copier/ Printer Alcove	Provide space for copier and printers for facility operations team.	NA	One(1) or two (2) at 60 sf each.	Close proximity to 7.1 and 7.2	1. Accommodate large copy machine and computer printer (NIC). Provide 208V, 1phase, 30A outlet. 2. Natural daylighting discouraged. 3. Provide counter top, 6-ft long min. Provide base cabinets and wall cabinets. Provide two (2) standard outlets above countertop and One (1) 4-port telecommunications outlet above countertop. 4. STC 40 enclosure minimum. 5. Two (2) 4-port telecommunications outlets. Locate on opposite interior

					walls. 6. Provide two (2) isolated ground duplex receptacle outlets in each room adjacent to the telecommunications outlets. Provide one (1) duplex standard receptacle on each wall.
8. General Support					
8.1 Large Conferenc e Room	Provide space for project and team meetings	80 person occupa ncy	One (1) at 1200sf	Central location on Lower Level Provide access from the Kitchenette / Breakroom portion to the exterior patio, 8.11	1. Locate away from the exterior perimeter. Daylighting not required. 2. Provide 2 full height acoustical accordion partition walls, roughly separating the room into thirds. 3. Provide retractable electric 8'X8' projection screen. 4. Accommodate bookshelves, three 3'x8' markerboards, and large conference table (all NIC). 5. STC 45 enclosure minimum. 6. Provide duplex outlet and support bracket at ceiling for suspended projector (projector is NIC). 7. Provide a telecommunications outlet centered in the floor of the Conference Room. Provide a floor-mounted duplex isolated ground outlet adjacent to the telecommunications outlet. 8. Provide 4-port telecommunications outlets at each wall. 9. Provide duplex receptacle outlets on each wall adjacent to the telecommunications outlets. 10. Variable lighting control dimmer. 11. TV / VCR 19" screen & mounting bracket (NIC). Provide outlet and blocking in wall for bracket. Kitchenette/Breakroom Area of Conf Rm: 1. Accommodate microwave, refrigerator, ice machine, paper towel dispenser, soap dispenser and 2 vending machines (all NIC). 2. Accommodate space for large recycle bins – 3 at 3'x3'x4' each. 3. Outlets & space accommodation for 2 vending machines. Machines are NIC.

					4. One (1) isolated ground duplex receptacle outlet, one duplex standard receptacle on each wall and two (2) GFCI outlets above countertop. 5. Accommodate tables and chairs (NIC). 6. One (1) 4-port telecommunications outlet and one wall-mount phone outlet near kitchenette. 7. Provide sink with faucet (hot & cold H2O), base cabinets, countertop with splash, wall cabinets and support for microwave.
8.2 Staff Office	Provide space for visiting staff.	1 ea. for a total of 6	Six (6) separate 120 sf offices accommodating one person each.	none	1. Exterior window at eye level – min 16 sf 2. Accommodate desk, markerboard, computer terminal, printer and credenza with 2 chairs (all NIC). 3. STC 40 enclosure minimum. 4. Provide a 4-port telecommunications outlet on each wall. 5. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
8.3 Exercise Room	Provide space for exercise equipment and work-out area		1 at 600 sf	Locate near east building entrance from WETF	1. TV / VCR 19" screen & mounting bracket (NIC). Provide outlet and blocking in wall for bracket. 2. Sheet vinyl flooring.
8.4 Network Support Office	Provide office space for network support staff, network support equipment and space for group file storage.	3	One (1) 360 sf office accommodating three persons	none	1. Exterior window preferred. 2. Accommodate desks, markerboard, computer terminals, layout space; network servers, storage & printer (all NIC). 3. Provide a 4-port telecommunications outlet on each wall. 4. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.
8.5 AV Storage Office	Provide space storage of AV equipment/materials.	NA	One (1) at 80 sf	Adjacent to 8.1	1. Provide duplex receptacle outlets on each wall. Locate adjacent to the telecommunications outlets.

8.6 Electrical Room	Electrical service and distribution	NA	Size TBD	Near 8.7 Near building exterior	1. Electrical transformers and panelboards. 2. Ventilation: 5 CFM per KVA of transformer. 3. STC 40 minimum enclosure. 4. Duplex standard outlets on each wall.
8.7 Mechanical Room(s)	Spaces to accommodate mechanical systems and equipment	NA	TBD	Near 8.6 Near building exterior	1. Back flow preventer 2. One (1) GFCI outlet at each wall. 3. STC 40 minimum enclosure. 4. Housekeeping pads and vibration isolation for equipment. 5. Pair of exterior service doors in 6 ft wide X 7-ft high frame. 6. Heat space to provide freeze protection. 7. Provide separate boiler room, if required by Code. 8. Record Drawings/O&M book rack. 9. Landscape irrigation controls & valves.
8.8 Data / Telephone Room(s)	House equipment needed for the data and communications systems	NA	**One per floor min, See Div 16,** TELE-COMMU-NICAT'NS Spec.	Centrally located in the Building and adjacent to 8.6 Locate a maximum of 90 meters cable distance from any other space.	Cap all conduit extensions. 1. No suspended ceiling, exposed structure acceptable. 2. Pair of service doors in 6 ft wide X 7-ft high frame. Open out. 3. Cable tray access to corridor distribution. 4. STC 40 minimum enclosure. 5. 24 hr HVAC. 6. Design per Electrical Standard Drawing ST7005. Coordinate size of Room(s) with CIC-4. 7. Plywood paneling attached to walls, painted with 2 coats of fire-retardant paint. 8. One of the telecommunications rooms is to accommodate the PTS cabinet.
8.9 Men's Restrooms, Women's Restrooms	Personal hygiene	NA	TBD, one restroom per sex min. per level.	Provide centrally located restrooms on all levels.	1. Size restrooms per 1997 Uniform Building Code (UBC), Appendix Chapter 29, Minimum Plumbing Fixtures. 2. Provide at least 2 water closets in each individual restroom. 3. Countertops and sinks. 4. Toilet compartments and urinal screens 5. Epoxy paint at walls or ceramic tile. 6. Epoxy paint at ceiling. 7. Quarry tile or ceramic tile at floor with appropriate floor base.

					8. STC 45 minimum enclosure. 9. One GFCI outlet above sink area. 10. Air pressure relationship: Negative. Air Changes per hour: 15, Outside air changes/hr: 1.5 11. Toilet and Bath Accessories.
8.10 Janitor Closet	Facility cleaning	NA	TBD, one min. per Level	Off of corridor, near 8.9	1. Mop sink and faucet (hot & cold H20). 2. Mop rack. 3. 3 ft long X 18 inches wide shelf. 4. Sheet vinyl flooring.
8.11 Covered Porch / Patio	Outside Break/Lunch Area Informal meetings	NA	250 sf (Space can be included as interior space)	Exterior access directly from 8.1	1. Open air covered patio. 2. Sealed concrete. 3. Accommodate three patio tables w/ 4 chairs each (NIC). 4. Provide exterior GFI outlet. 5. Landscape adjacent areas. 6. Provide exterior lighting.
8.12 Exterior Maintenance	Power and water for maintenance of building exterior	NA	NA	Near Mech Room	1. Two freeze-proof hose bibs, one @ front and back of building. One at patio. 2. One GFI power outlet @ each exterior door and at every 80 foot of building parameter. 3. GFI outlets at each piece of mechanical equipment on the roof (if any).
Function Number & Title	**Function Description**	**Staff**	**Number of Spaces & Size of ea.**	**Adjacencies**	**Constraints and unique requirements for each space.**
9.0 Circulation Spaces					
9.1 Main Entry Vestibule	Provide a transition space from the exterior to TSEOB Area for visitors to wait out of inclemant weather.	None	One at 100 sf min.	Physically adjacent to 9.2	1. Air pressure relationship: Positive, Air Changes per hour: 0, Outside air changes/hr: 0 2. Two GFCI outlets. 3. Provide ¾" conduit, pull wire and outlets for card or palm readers from the vestibules to 8.8 Telecommunications. 4. Fire Alarm Panel. 5. Enclosure on all walls and on ceiling. 6. Recessed floor mat. 7. Glazing at exterior wall. 8. Accommodate space for 10 linear feet of wall display area. Display supports

					and specialty lighting are NIC.
9.2 Main Entry Area/ Reception	Entrance space for TSEOB.	None	One at 60 sf	Locate off of 9.1 and 9.3	1. Accommodate small seating area for 3-4 people. Tables and chairs are NIC. 2. One (1) wall-mounted lockable directory, 4ftx4ft. 3. Accommodate sign in/out board. NIC. 4. One (1) 4-port telecommunications outlet. 5. Fire extinguisher cabinet. 6. One (1) standard outlet at each wall. 7. Glazing at vestibule wall.
9.3 Corridors	Pedestrian and equipment circulation	NA	5'-6" minimum clear width	All spaces, both levels	1. Electric drinking fountain near restrooms. 2. Fire extinguisher cabinets. 3. Outlets at 20 ft spacing. 4. Acoustical Control: Low Reverberation. 5. Cable tray for cable distribution. 6. Provide two solid core doors with badge readers at locations in the Corridor to be determined by LANL. Doors are security access control purposes.
9.4 Stairs	Pedestrian and equipment circulation	Min., as calculated by Code	TBD	Off of 9.3	1. One-hour separation including rated doors. 2. Air pressure relationship: Positive 3. One outlet per floor 4. STC 40 minimum enclosure
9.5 Elevator & Elevator Equipment Room	Transport personnel, furnishings and equipment	Three person occupancy	One car, per Section 14240	Centrally Located, Off of 9.3, Near 9.2	1. See Section 14240
9.6 Secondary Entrance Vestibule	Provide a transition space from the exterior TSEOB. Provide access for furniture and equipment.	None	One (1) at 60 sf min. located on the Lower Level.	Vestibule to lead to Corridor. Provide easy access to elevator.	1. Air pressure relationship: Positive, Air Changes per hour: 0, Outside air changes/hr: 0 2. One GFCI outlet. 3. Double doors, 5'-6" wide opening minimum, to allow for furniture and equipment access. 4. Provide ¾" conduit, pull wire and outlets for card or palm readers from the vestibules to 8.8 Telecommunications. 5. Enclosure on all walls and on ceiling. 6. Recessed floor mat. 7. Glazing at exterior wall. 8. One (1) wall-mounted lockable

					directory, 4ftx4ft.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions under which building systems are to be installed. Do not proceed with work until unsatisfactory conditions have been corrected in an acceptable manner.

3.2 INSTALLATION

Set building elements plumb, level and true in line. Provide proper support for all materials and anchor securely in place.